

Remarks

In the present response, claims 1 – 20 are presented for examination.

Claim Rejections: 35 USC § 103(a)

Claims 1-5, and 8-20 are rejected under 35 USC § 103(a) as being unpatentable over US publication number 2002/0193991 (Bennett) in view of USPN 6,728,671 (Johnson). These rejections are traversed.

Each of the independent claims recites one or more elements that are not taught or suggested in Bennett in view of Johnson. These missing elements show that the differences between the combined teachings in the art and the recitations in the claims are great. As such, the pending claims are not a predictable variation of the art to one of ordinary skill in the art.

As one example, independent claim 1 recites assessing resources of each of a plurality of different ASR engines to determine which of the plurality of different ASR engines are busy serving users. This claim element is not taught in Bennett in view of Johnson.

In Bennett, the input stream is routed to one or more speech recognition engines (see Bennett at paragraph [0023]). In some situations, Bennett does not route the input stream to all of the speech recognition engines. Bennett explains when this situation occurs:

For example, the incoming stream may be at a point in the dialogue with the system that is beyond command and control. The speech recognition system may therefore not send the incoming stream to the recognizers that have been identified by the system as being only for command and control. Other types of cues may also be available to the system allowing it to route the stream to a subset of recognizers. (See Bennett at paragraph [0023]).

Thus, Bennett teaches that the incoming stream is not routed to speech recognition engines that are identified as being only for command and control. Bennett,

however, does not assess resources of each of a plurality of different ASR engines to determine which of the plurality of different ASR engines are busy serving users. Instead, Bennett identifies which ASR engine is for command and control. Furthermore, although Bennett does state that other types of cues may be available, Bennett never suggests that such cues include assessing resources of each of a plurality of different ASR engines to determine which of the plurality of different ASR engines are busy serving users. Bennett also does not teach or suggest assigning the speech utterance to a single ASR engine when the plurality of different ASR engines are busy and assigning the speech utterance to a plurality of different ASR engines when the plurality of different ASR engines are not busy.

Johnson teaches an ASR system that increases ASR capacity without increasing a number of current ASR input channels (see Johnson column 3, lines 25-29). Johnson uses delay functionalities to provide this increase in ASR capacity: “[B]ased upon the degree of utilization of the ASR 240 input channels, the processor 210 may select various delay modes, such as no delay, light (low) delay, intermediate (medium) delay, or heavy (high) delay” (see Johnson at column 6, lines 26-29). The use of a delay mode is reiterated in the method of Fig. 2 in Johnson (see column 8, lines 33-50). Here, Johnson explains that the delay mode uses “any various combinations of increased periods of silence and longer durations of messages” (column 8, lines 46-47).

Thus, Johnson assesses usage of the ASR input channels and then uses delays. By contrast, claim 1 recites assessing resources of the ASR engines to determine which of the engines are busy serving users. The claim then recites assigning the speech utterance to a single ASR engine when the plurality of different ASR engines are busy and assigning the speech utterance to a plurality of different ASR engines when the plurality of different ASR engines are not busy. Johnson assesses ASR input channels and uses delays. Claim 1 assesses ASR engine resources and assigns the speech utterance to a single ASR engine when the ASR engines are busy and to plural ASR engines when the ASR engines are not busy. Johnson does not assess resources to perform such an assignment to a single or multiple ASR engines. Johnson assesses resources to determine a level of delay.

Independent claims 8 and 14 also recite elements not taught or suggested in Bennett in view of Johnson. For example, claim 8 recites means for evaluating resources of the ASR system to determine whether the ASR system is busy processing utterances of users. The claim then recites means for selecting between a single ASR engine and a group of ASR engines to recognize the utterance of the user, wherein the means for selecting utilizes the evaluation of resources to select the single ASR engine when the ASR system is busy processing the utterances of the users and to select the group of ASR engines when the ASR system is not busy processing the utterances of the users. Claim 14 recites a computer system that assesses resources being used by each of the plurality of different ASR engines and selects a single ASR engine to analyze a speech utterance when the system is busy and selects multiple ASR engines to analyze the speech utterance when the system is not busy.

The differences between the claims and the teachings in the art are great since the references fail to teach or suggest all of the claim elements. As such, the pending claims are not a predictable variation of Bennett in view of Johnson to one of ordinary skill in the art.

For at least these reasons, the claims are allowable over the art of record.

CONCLUSION

In view of the above, Applicants believe that all pending claims are in condition for allowance. Allowance of these claims is respectfully requested.

Any inquiry regarding this Amendment and Response should be directed to Philip S. Lyren at Telephone No. 832-236-5529. In addition, all correspondence should continue to be directed to the following address:

Hewlett-Packard Company
Intellectual Property Administration
P.O. Box 272400
Fort Collins, Colorado 80527-2400

Respectfully submitted,

/Philip S. Lyren #40,709/

Philip S. Lyren
Reg. No. 40,709
Ph: 832-236-5529